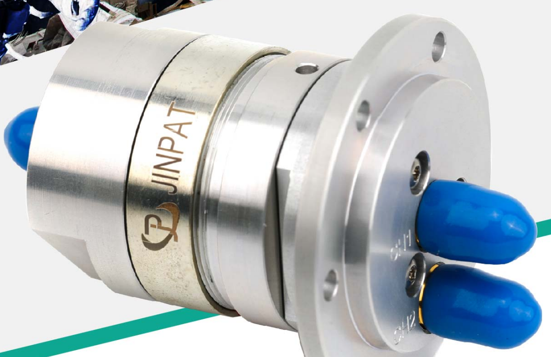
Coax Rotary Joints



Both LPHF and LPC-1C series are a group of coax rotary joints manufactured by JINPAT Electronics for transmitting high frequency (up to 50GHz) and high-speed serial digital signal. Excellent in shielded effects and anti-interference capacity, they enjoy compact structure and are easy to integrate into other equipment. Both separate and integrated transmission of multiple signals is available. JINPAT, with its years of experience in electrical slip ring manufacturing, features hybrid rotary joints that integrate high frequency, control, communication and power signals, as well as liquid media. The unit has an ultra-low insertion loss, VSWR and phase-WOW (＜1°). Given comprehensive tests and checks, JINPAT coaxial rotary joint is proven to be of eminent quality. Meanwhile, they present a reliable transmission with a long service life. Whether for connector type or other needs, JINPAT custom solution can serve customers from all over the world.

Parameters

LPCC Series — RF Coaxial Connector

High Frequency		
Frequency Range	DC-3GHz	DC-1.5GHz
Characteristic Impedance	50Ω	75Ω
Insertion Loss	< 1.2dB	< 1.5dB
Insertion Loss Variation	< 0.1dB	< 0.1dB
VSWR	< 1.6	< 1.8
VSWR Variation	< 0.1	< 0.1
Phase-WOW	< 1°	< 1°
Wire Size	TFLEX - 405/RG316	RG 179
Connector Type	SMA / BNC / MCX / F (optional)	
Wire Length	250mm (optional)	

Mechanical	
Working Speed	0~80 RPM
Temperature	-40℃~+80℃
Humidity	60%RH
Housing	Brass
Withstand Tension (Max)	10 N (for reference)
IP	IP50
Contact	Gold to Gold

LPC-1C Series High-Frequency and Electrical Integrated Rotary Joint

Electric & Electrical

Current Rating	2 A
Voltage Rating	240VDC/AC
Dielectric Strength	> 500VAC@50Hz
Insulation	100MΩ@500VDC
Electrical Noise	< 15mΩ

Mechanical

Working Speed	0~80 RPM
Lead Wire	AWG 28#/ AWG 30#
	250mm
Contact	Precious Metal
Housing	Aluminum Alloy
IP	IP54

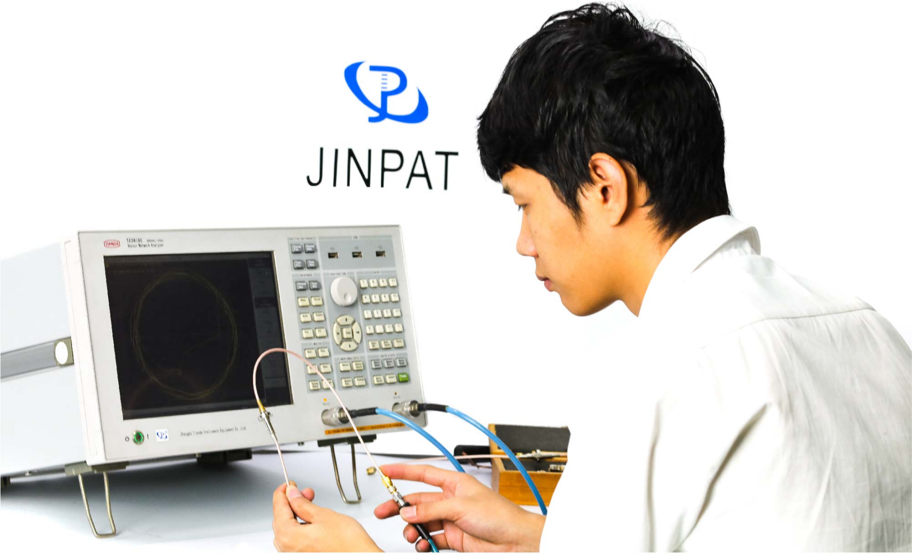
Environment

Temperature	-40°C~+80°C
Humidity	60%RH
IP	IP54

Coaxial Connector

Type 1		Type 2	
Frequency Range	DC-3GHz	Frequency Range	DC- 1.5GHz
Characteristic Impedance	50Ω	Characteristic Impedance	75Ω
Insertion Loss	< 1.2dB	Insertion Loss	< 1.5dB
Insertion Loss Variation	< 0.1dB	Insertion Loss Variation	< 0.1dB
VSWR	< 1.6	VSWR	< 1.8
VSWR Variation	< 0.1	VSWR Variation	< 0.1
Phase-WOW	< 1°	Phase-WOW	< 1°
Wire Size	TFLEX - 405/RG316/RG179	Wire Size	TFLEX - 405/RG316/RG179
Wire Length: 250mm (optional)			
Connector Type: SMA / BNC / MCX / F (optional)			
Withstand Tension (Max): 10 N (for reference)			

* For any request beyond specification above, please feel free to contact us.

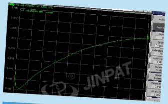


Features & Advantages

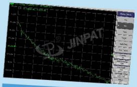
- Compact design, strong anti-interference capacity
- Multiple signals can be transmitted simultaneously
- Integrated transmission of high frequency signal and electricity/other signals is supported
- Extremely low attenuation loss, low transmitting fluctuation
- Optional frequency range
- Ultra-long service life
- Free of maintenance
- Custom solution, rapid delivery

High frequency gold plated part

High frequency wire



VSWR test chart



Insertion loss test chart

Application

Radar Antenna

Communication on the Move

HD Network Video Monitoring System

Satellite Communication System

Model	Channel	Frequency	Peak Power	Connector	Max Average Power (W)	VSWR	Insertion Loss (dB)	Min Isolation (dB)
LPHF-01A	1	DC-18GHz	1500W	SMA-f(50Ω)	200W@1GHz 30W@18GHz	1.20@0-6GHz 1.25@6-12GHz 1.35@12-18GHz	0.25@0-6GHz 0.3@6-12GHz 0.4@12-18GHz	/
LPHF-01B	1	DC-18GHz	1500W	SMA-f(50Ω)	200W@1GHz 30W@18GHz	1.20@0-6GHz 1.25@6-12GHz 1.35@12-18GHz	0.25@0-6GHz 0.3@6-12GHz 0.4@12-18GHz	/
LPHF-01C	1	DC-18GHz	1500W	SMA-f(50Ω)	200W@1GHz 30W@18GHz	1.20@0-6GHz 1.25@6-12GHz 1.30@12-18GHz	0.25@0-6GHz 0.3@6-12GHz 0.4@12-18GHz	/
LPHF-01D	1	DC-18GHz	3000W	SMA-f(50Ω)	500W@1GHz 30W@18GHz	1.3@0-10GHz 1.4@10-18GHz	0.25@0-10GHz 0.3@10-18GHz	/
LPHF-01E	1	DC-26.5GHz	3000W	3.5mm-f(50Ω)	200W@1GHz 50W@18GHz 30W@26.5GHz	1.30@0-12GHz 1.35@12-18GHz 1.7@18-26.5GHz	0.3@0-12GHz 0.35@12-18GHz 0.7@18-26.5GHz	/
LPHF-01F	1	DC-40GHz	300W	2.92mm-f(50Ω)	40W@1GHz 3W@18GHz 1W@40GHz	1.4@0-18GHz 1.7@18-26.5GHz 1.9@26.5-40GHz	0.45@0-18GHz 0.95@18-26.5GHz 1.25@26.5-40GHz	/

LPHF-01G	1	DC-50GHz	1000W	2.4mm-f(50Ω)	50W@1GHz 15W@10GHz 3W@50GHz	1.3@0-10GHz 1.4@10-26.5GHz 1.7@26.5-50GHz	0.3@0-10GHz 0.5@10-26.5GHz 0.9@26.5-50GHz	/
LPHF-01H	1	DC-18GHz	1500W	N-f(50Ω)	200W@1GHz 100W@8GHz 70W@18GHz	1.1@0-8GHz 1.18@8-15GHz 1.22@15-18GHz	0.12@0-8GHz 0.15@8-15GHz 0.20@15-18GHz	/
LPHF-01L	1	DC-40GHz	500W	2.92mm-f(50Ω)	50W@1GHz	1.40@0-18GHz 1.65@18-26.5GHz 1.80@26.5-40GHz	0.5@0-18GHz 0.7@18-26.5GHz 1.0@26.5-40GHz	/
LPHF-01M	1	DC-18GHz	5000W	SMA-f(50Ω)	200W@1GHz	1.5	0.3	/
LPHF-02A	2	DC-4.5GHz	1500W	SMA-f(50Ω)	60W@4.5GHz	1.18	0.04	50
		DC-4.5GHz	1500W	SMA-f(50Ω)	50W@4.5GHz	1.5	0.16	50
LPHF-02B	2	DC-18GHz	3000W	SMA-f(50Ω)	50W@18GHz	1.2@0-4GHz 1.5@4-18GHz	0.08@0-4GHz 0.48@4-18GHz	60
		DC-4GHz	3000W	SMA-f(50Ω)	50W@4GHz	1.4@0-2GHz 2.5@2-4GHz	0.48@0-2GHz 0.98@2-4GHz	60
LPHF-02C	2	DC-18GHz	1000W	SMA-f(50Ω)	50W@18GHz	1.35@0-8GHz 1.5@8-18GHz	0.4@0-8GHz 1.0@8-18GHz	50
		DC-13GHz	1000W	SMA-f(50Ω)	50W@13GHz	2.0	1.0	50
LPHF-02D	2	DC-18GHz	1000W	SMA-f(50Ω)	25W@12GHz 100W@2GHz 17W@16GHz 60W@4GHz	1.35@0-8GHz 1.5@8-18GHz	0.4@0-8GHz 1.0@8-18GHz	50
		DC-18GHz	1000W	SMA-f(50Ω)	10W	2.0@0-4GHz 3.5@8-12GHz 2.5@4-8GHz 4.5@12-18GHz	0.5@0-4GHz 2.0@8-12GHz 1.0@4-8GHz 3.5@12-18GHz	50
LPHF-02E	2	DC-5GHz	1500W	SMA-f(50Ω)	60W@5GHz	1.2	0.25	50
		DC-5GHz	1500W	SMA-f(50Ω)	50W@5GHz	1.5	0.45	50
LPHF-03A	3	DC-3GHz	1000W	SMA-f(50Ω)	50W@1GHz	1.3	0.4	60
		DC-3GHz	1000W	SMA-f(50Ω)	50W@1GHz	2.0	0.7	60
		DC-3GHz	1000W	SMA-f(50Ω)	50W@1GHz	2.0	0.4	60
LPHF-03B	3	DC-3GHz	3000W	TNC(50Ω)	100W	1.3@0-1GHz 1.5@1-2GHz 1.7@2-3GHz	0.75	60
		DC-3GHz	3000W	TNC(50Ω)	30W	1.3@0-1GHz 1.5@1-2GHz 1.7@2-3GHz	0.75	60
		DC-3GHz	3000W	TNC(50Ω)	50W	1.2@0-1GHz 1.3@2-3GHz 1.25@1-2GHz	0.75	60

* The specification above might be subject to change prior to notice

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